Index of Claims



Application/Control No.

10/749,426

Date

Examiner

Reexamination

KWAK ET AL.

Applicant(s)/Patent under

Art Unit

Cassandra Cox

2816

| 7 | Rejected |
|---|----------|
| - | Allowed  |

(Through numeral)
Cancelled Restricted

Non-Elected N Interference

**Appeal** Α Objected

|       |          |              |          |          |          |  |  |          |          |          | ٦        |       |          | _ |
|-------|----------|--------------|----------|----------|----------|--|--|----------|----------|----------|----------|-------|----------|---|
| Cla   | aim      | L            | ,        | , .      |          | Dat  | е  |          | ,        |          |          | CI    | aim      | L |
| Final | Original | 5/25/05      |          |          |          |  |  |          |          |          |          | Final | Original |   |
| 1     | 1        | =            | П        |          |          |  |  |          | Γ        |          |          |       | 51       | Τ |
|       |          | =            |          |          |          |  | П  | T        |          |          | 1        |       | 52       | T |
| 3     | 3        | =            |          | Г        | Т        |  | T  | $\vdash$ |          |          | 1        |       | 53       | T |
| 4     | 4        | Ξ            |          |          | Π        |  |  | Т        |          |          |          |       | 54       | Ť |
| 5     | 5        | =            |          |          | Г        |  |  | П        | T        | П        | 1        |       | 54<br>55 | T |
| 6     | 6        | =            |          | Г        | Т        | T  |  |          |          | Γ        |          |       | 56       | T |
| 7     | 7        | =            |          |          |          |  |  |          |          |          |          |       | 57       | T |
| 8     | 8        | =            |          |          | T        | T  |  | Г        | Г        |          |          |       | 58       | T |
| 9     | 9        | =            |          |          | Т        |  | Г  |          |          | 1        |          |       | 59       | T |
| 10    | 10       | Ξ            |          |          |          |  |  |          |          |          |          |       | 60       | T |
| 11    | 11       | =            |          |          | T        |  | Г  | Г        | T        |          |          |       | 61       | T |
| 12    | 12       | =            |          |          |          | T  |  | 1        | <b> </b> |          | 1        |       | 62       | T |
|       | 13       |              |          |          |          |  |  | T        | T        |          | 1        |       | 62<br>63 | T |
|       | 14       |              |          |          | 1        | 1  |  |          | T        | T        | 1        |       | 64       | t |
|       | 15       |              |          |          |          | 1  | T  |          |          |          | 1        |       | 65       | t |
|       | 16       | -            |          | ·        | 1        | t  |  |          | $\vdash$ | <b>—</b> | 1        |       | 66       | t |
|       | 17       | _            | ┢        | $\vdash$ | T        | H  | $\vdash$   | T        | ┢        |          | 1 1      |       | 67       | t |
|       | 18       | <del> </del> | _        | $\vdash$ |          | 1  | <del>                                     </del> | $\vdash$ | $\vdash$ |          | 1        |       | 68       | t |
|       | 19       |              |          | $\vdash$ | $\vdash$ | 1  |  | $\vdash$ |          |          | 1 1      |       | 69       | t |
|       | 20       |              |          | $\vdash$ | H        |  | <del> </del>                                     | $\vdash$ | H        | H        | 1        |       | 70       | ┝ |
|       | 21       |              | $\vdash$ | $\vdash$ |          | <del>                                     </del> | <del> </del>                                     | ┢        | $\vdash$ | $\vdash$ | 1        |       | 71       | t |
|       | 22       | _            | _        |          | H        | H  | ┢╌   | ╁        | -        | ┼        | 1 1      |       | 72       | ╁ |
|       | 23       | _            | _        |          | H        | $\vdash$   | H  | ├-       | ╁─       | ┢        | 1        |       | 73       | H |
|       | 24       |              | Н        |          |          | $\vdash$   |  | -        | -        | ┢        | 1        |       | 74       | H |
|       | 25       |              |          | -        | ┢        | $\vdash$   | $\vdash$   | ╁╴       | -        | -        | 1        |       | 75       | ╁ |
|       | 26       | -            | Н        | -        | ┢        | -  | ├  | ┢        | $\vdash$ | $\vdash$ | 1        |       | 76       | ╁ |
|       | 27       |              | $\vdash$ |          | -        | ┢  | $\vdash$   | ╁        | $\vdash$ | ┢┈       | 1        |       | 77       | H |
|       | 28       |              | -        | _        |          | ╁  | $\vdash$   | -        | ├-       | ┢        |          |       | 78       | ┞ |
|       | 29       |              | $\dashv$ |          |          |  |  | ⊢        | ⊢        | ⊢        | 1        |       | 70       | ┞ |
|       | 30       | -            | $\dashv$ | -        | -        | ┢  | $\vdash$   | $\vdash$ | ⊢        | -        | ł I      |       | 79<br>80 | ┞ |
|       | 31       |              | $\vdash$ | —        | -        | -  | -  |          | ┝        | -        | -        |       | 80       | H |
|       |          |              |          |          | -        | _  | ⊢  |          | -        | -        |          |       | 81       | ┞ |
|       | 32       |              | -        |          | $\vdash$ | -  | ⊢  | -        | _        | _        |          |       | 82       | ┞ |
|       | 33       | -            |          |          | ⊢        | -  | ⊢  | -        |          | ├        |          |       | 83       | L |
|       | 34<br>35 | -            | $\dashv$ |          | _        |  |  | ├        |          | <u> </u> | <b>!</b> |       | 84       | L |
| -     |          |              | -        |          | _        | _  | _  | ├—       |          | ļ        | l        |       | 85       | L |
|       | 36       | _            | -        |          | _        | ⊢  | _  |          | <u> </u> | -        | <b>.</b> |       | 86       | L |
|       | 37       | -            | -        |          | _        | _  |  | _        | <u> </u> | <u> </u> |          |       | 87       | L |
|       | 38       | $\dashv$     |          |          | -        | <u> </u>   | _  | -        | <u> </u> | _        |          | -     | 88       | L |
|       | 39       |              |          |          | _        | ⊢  | ⊢  | -        |          |          | 1        |       | 89       | L |
|       | 40       |              | $\dashv$ |          |          | _  |  | <u> </u> | ļ        | _        |          |       | 90       | L |
|       | 41       |              |          |          | <u> </u> | ├  |  | _        | <u> </u> | _        | <b></b>  |       | 91       | L |
|       | 42       | $\dashv$     | _        |          | _        | _  |  | Ļ.       | <u> </u> | _        |          |       | 92       | L |
|       | 43       | -            | -        |          |          | _  | _  | _        | L_       | ļ        |          |       | 93       | L |
|       | 44       | _            |          | _        | L_       |  | <u> </u>   | ļ        |          | <u> </u> |          |       | 94       | L |
|       | 45       | _            | _        |          |          |  |  | L.       |          | L_       |          |       | 95       | L |
|       | 46       | _            | _        |          | <u> </u> | <u> </u>   |  | $\vdash$ | <u> </u> |          |          |       | 96       | L |
|       | 47       | _            | _        |          | <u> </u> | <b> </b>   |  |          | L_       | <u> </u> |          |       | 97       | L |
|       | 48       |              | _        |          | L        | H  | L_   | L        | <u> </u> | <u> </u> |          |       | 98       | L |
|       | 49       | _            | _        |          | _        | <u></u>  | <u>L</u>   |          | L_       | <u> </u> |          |       | 99       | L |
| ı     | 50       | - 1          | - 1      |          |          | i  |  | 1        |          | 1        | 1:::::   |       | 100      | 1 |

| Ciair   | П        | Date     |          |              |  |          |          | :  | ::::     | Claim       |       | Date  |          |          |          |          |          |          |          | I∷   |  |  |      |
|---|----------|----------|----------|--------------|--|----------|----------|--|----------|-------------|-------|-------|----------|----------|----------|----------|----------|----------|----------|--|--|--|------|
|   | Original | 5/25/05  |          |              |  |          |          |  |          |             |       | Final | Original |          |          |          |          |          |          |  |  |  |      |
| 1   | 1        | =        |          |              |  |          |          | [  |          |             |       |       | 51       |          |          |          |          |          |          | П  |  | П  | 1::  |
| 2   | 2        | =        |          |              |  |          | Т        |  |          |             |       |       | 52       |          |          |          | _        |          | Т        | T  | t  | Ħ  | 1::  |
| 3   | 3        | =        | _        | _            |  | $\vdash$ | T        | t  |          | <b>-</b>    |       |       | 53       |          |          |          |          |          | t        | ┢  | <del> </del>                                     | $\vdash$   | 1    |
| 4   | 4        | =        | _        | ┢            | H  | $\vdash$ | $\vdash$ | <del>                                     </del> | -        | $\dashv$    |       |       | 54       | H        |          |          |          | ╁╾       | ╁        | ╁  | ╆  | -  | ł    |
| 5   | 5        | =        |          | ┢            | -  | -        | -        | ┢  | $\vdash$ |             |       |       | 55       |          |          | _        | ⊢        | ⊢        | ⊢        | ├  | $\vdash$   | ⊢  | ł    |
| 1 2 1   | 2        |          | _        | <del> </del> | ├  | ┝        | ┝        | $\vdash$   | $\vdash$ | -           |       |       | 22       | $\vdash$ | _        |          | -        | -        | ⊢        | ├  | -  | ├—   | l    |
|   | 6        | =        |          |              | ┞  | <u> </u> | ┡        | $\vdash$   | <b>-</b> | _           |       |       | 56       | -        |          |          |          |          | _        | _  | <u> </u>   | ┺  | l    |
|   | 7        | =        |          | _            | ╙  | ╙        | ┺        | <u> </u>   |          | _           |       |       | 57       | ш        |          |          |          | L_       | _        | _  | _  | L  | l    |
|   | 8        | =        |          |              | ┖  | <u> </u> | <u> </u> |  | Ц.       |             |       |       | 58       | Ш        |          |          |          | L_       | <u> </u> | L  |  | L.   |      |
|   | 9        | Ξ        |          |              |  |          | L        |  |          |             |       |       | 59       |          |          |          |          |          |          | <u> </u>   |  |  |      |
|   | 10       | =        |          |              |  |          |          | ŀ  |          |             |       | [     | 60       |          |          |          |          | [ -      |          |  |  |  | l    |
| 11  | 11       | =        |          |              |  |          |          |  |          |             |       |       | 61       |          |          |          |          | П        | Г        |  |  |  |      |
| 12  | 12       | =        |          |              |  |          |          | i  |          |             |       |       | 62       | П        |          |          |          |          |          | Ī  |  |  | l    |
|   | 13       |          |          |              |  |          | <u> </u> |  |          | $\dashv$    |       |       | 63       | $\vdash$ |          |          |          |          | Т        | <del>                                     </del> | _  | ┢  | l    |
|   | 14       |          |          | _            | <del>                                     </del> | $\vdash$ | f        | Н  | +        | $\dashv$    |       |       | 64       | Н        |          |          | $\vdash$ | ├-       | -        | $\vdash$   | <del>                                     </del> | <del>                                     </del> | l    |
|   | 15       | $\dashv$ | -        |              | <del>                                     </del> | -        | ╁╾       | $\vdash$   | +        | -           |       | _     | 65       | -        | -        |          | _        | $\vdash$ | $\vdash$ | ⊢  | -  | ├  | l    |
| <del>                                      </del> | 16       |          | _        | -            | ├─   | ⊢        | ┢        | $\vdash$   | -        | -           |       |       | 66       | Н        |          |          | -        | ├        | -        | -  | $\vdash$   | ⊢  | ł    |
| <del> </del>                                      | 10       |          |          | _            | ┢  | ⊢        | -        | ₩  |          |             |       |       | 66       | $\vdash$ |          | _        | _        | _        | _        |  | $\vdash$   | <u> </u>   | ł    |
|   | 17       |          |          |              | ┡  |          | <u> </u> | Ш  |          | -           |       |       | 67       |          |          |          | _        | _        |          |  |  | <b>└</b>   |      |
|   | 18       | _        |          |              | _  |          | L.,      | <u> </u>   |          | _           |       |       | 68       | <u> </u> | _        |          |          | <u> </u> |          | L.   |  | _  |      |
|   | 19       | _        |          |              |  | <u> </u> | L_       |  |          | _           |       |       | 69       |          |          |          |          |          |          | _  | <u> </u>   | _  | H    |
|   | 20       | _        |          |              |  | ·        |          |  |          | _           |       |       | 70       |          |          |          |          |          |          |  |  | L  | ::   |
| 1   | 21       |          |          |              |  |          |          |  |          | :           |       |       | 71       |          |          |          |          |          |          |  |  |  |      |
|   | 22       |          |          |              |  |          |          |  |          | :           |       |       | 72       |          |          |          |          |          |          |  |  |  | ::   |
|   | 23       |          |          |              |  |          |          |  |          | 7           |       |       | 73       |          |          |          |          |          |          |  |  |  | ::   |
| 1 2   | 24       |          | $\Box$   |              |  |          |          | П  |          | 7           |       |       | 74       |          |          |          |          |          |          |  |  |  | iii  |
| 1   | 25       |          |          |              |  |          |          |  |          |             |       |       | 75       |          |          |          |          |          |          | _  |  |  |      |
|   | 26       |          |          |              |  | T        |          |  |          | <b>-</b>  : |       |       | 76       |          |          |          |          |          |          |  |  |  |      |
| 2   | 27       | T        |          |              |  |          |          | П  |          |             |       |       | 77       | Ħ        |          |          |          | $\vdash$ |          |  | Н  | Т  |      |
|   | 28       |          |          |              | _  |          | Н        |  |          | ٠           |       |       | 78       | H        | $\dashv$ | _        |          |          |          | -  |  | $\vdash$   | ::   |
|   | 29       |          | $\dashv$ |              |  |          | _        | <del>                                     </del> | $\dashv$ | -           |       | _     | 79       | $\vdash$ | $\dashv$ | -        | -        | -        | _        | -  | Н  | $\vdash$   |      |
| <del>     </del>                                  | 30       | $\dashv$ | $\dashv$ |              | _  | ┢        | _        | $\vdash$   | -        | -           |       | -     | 80       | -        | $\dashv$ |          |          | _        |          | H  | Н  | -  |      |
| <del>     </del>                                  | 31       | $\dashv$ | $\dashv$ |              | -  | $\vdash$ |          | $\vdash$   |          |             |       |       | 81       | $\vdash$ | $\dashv$ | -        |          | -        | _        | H  | Н  | -  | ::   |
|   |          | $\dashv$ |          |              |  | -        |          |  |          | -           |       |       |          | -        |          | _        |          |          |          | $\vdash$   |  | _  | ::   |
|   | 32<br>33 |          | -        |              | $\vdash$   | <u> </u> |          | <del>                                     </del> |          |             |       |       | 82       | $\vdash$ | $\dashv$ |          |          |          | _        |  | -  | $\vdash$   | ::   |
|   |          | -        |          |              | $\vdash$   | _        | $\vdash$ | $\vdash$   |          | -           |       |       | 83       | $\vdash$ |          | _        |          |          |          | -  | H  | <u> </u>   | ::   |
|   | 34       | -+       |          |              | <u> </u>   | <u> </u> | _        | $\vdash$   |          | -           |       |       | 84       |          |          | _        |          |          |          | _  |  | _  | H    |
|   | 35       |          | -        | _            | L  | _        | <u> </u> |  |          | -           |       |       | 85       |          | _        | _        |          |          |          | _  |  | _  | ::   |
| 3   | 36       | _        |          |              | _  | $\vdash$ |          | $\sqcup$   |          | _           |       |       | 86       |          |          | _        |          |          |          |  |  | _  |      |
|   | 37       | _        | _        |              |  |          |          | Ш  | _        | 4           |       |       | 87       | $\dashv$ |          | _        |          |          |          |  |  | _  |      |
| 3   | 38       | _        | _        |              | _  |          |          | $\sqcup$   |          | _ :         |       |       | 88       |          | _        |          |          |          |          |  |  |  | ::   |
|   | 39       |          |          |              |  |          |          |  |          | _           |       |       | 89       |          |          |          |          |          |          |  |  |  |      |
| 4   | 10       |          |          |              |  |          |          |  |          | _::         |       |       | 90       |          |          |          |          |          |          |  |  |  | i    |
| 4   | 11       | 1        |          |              |  |          |          |  |          |             | [     |       | 91       |          |          |          |          |          |          |  |  |  |      |
| 4   | 12       |          |          |              |  |          |          |  |          | 7           |       |       | 92       |          |          |          |          |          |          |  |  |  |      |
| 4   | 13       |          | Ī        |              |  |          |          |  |          | 7           |       | Í     | 93       |          |          |          |          |          |          |  |  |  | liii |
|   | 4        | $\dashv$ |          | $\neg$       |  |          |          | Ħ  |          | ١::         |       |       | 94       |          |          |          |          | $\neg$   |          |  |  |  |      |
|   | 5        | 寸        | 7        |              |  |          |          |  |          | 1           | ı     |       | 95       | $\dashv$ | 寸        |          |          |          |          |  | $\dashv$   | $\Box$   |      |
| 4   | 6        | $\dashv$ | 寸        |              | _  |          |          | Ħ  | $\neg +$ | ٦.          | :::I  |       | 96       |          | $\dashv$ |          |          |          |          |  |  | $\Box$   |      |
| 14  | 17       | $\dashv$ | $\dashv$ |              | T  |          |          | H  | _        | 1           | ii l  |       | 97       | $\dashv$ | $\dashv$ | $\neg$   | ᅥ        | $\dashv$ |          |  | $\dashv$   | $\vdash$   |      |
|   | 8        | 7        | +        |              |  |          | _        | $\vdash$   | $\dashv$ | $\dashv$    | ii)   |       | 98       |          | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ | -        | -  |  |  |      |
|   | 9        | $\dashv$ | _        |              | Н  |          | -        | $\vdash$   |          | -           | ıŀ    |       | 99       | +        | $\dashv$ | $\dashv$ | -        |          |          | -  | $\dashv$   | Н  |      |
|   | 50       | $\dashv$ | -+       | $\dashv$     | $\dashv$   |          |          | -  |          | $\dashv$    | ŀ     |       | 100      | -        | $\dashv$ | ╌┤       | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$   | $\dashv$   | $\vdash$   |      |
| <u> </u>  | ,,,      |          |          |              | _  | لــــا   | لب       |  |          | :           | ····L |       | 100      |          |          |          |          |          |          | Щ  | Ш  | $oldsymbol{}$                                    | :::  |

|   | CI    | Date  |          |  |           |              |          |          |  |              |                      |  |
|---|-------|---|----------|--|-----------|--------------|----------|----------|--|--------------|----------------------|--|
|   | Final | Original  |          |  |           |              |          |          |  |              |                      |  |
|   |       |   |          |  |           |              |          | _        | _  | _            | Ш                    |  |
|   |       | 101   |          | ╁  | -         | ⊢            | -        | $\vdash$ | ⊢  |              | Н                    |  |
|   |       | 102   |          | $\vdash$   | -         | <del> </del> | ⊢        | <u> </u> | -  | -            | Н                    |  |
| : |       | 102<br>103<br>104   |          | ┢  |           |              |          |          | t  |              | Н                    |  |
|   |       | 105   |          | T  |           |              |          |          | <del>                                     </del> |              |                      |  |
| : |       | 105<br>106  |          |  |           |              |          |          |  |              |                      |  |
| 1 |       | 107   |          |  |           |              |          |          | Ì  |              |                      |  |
| : |       | 108<br>109  |          |  |           |              |          |          |  |              |                      |  |
| : |       | 109   |          |  |           |              |          |          |  |              | Ш                    |  |
| : |       | 110<br>111  |          | _  | <u> </u>  |              | <u> </u> | _        | <u> </u>   | _            | Ш                    |  |
|   |       | 111   |          | _  |           |              | _        | _        | <u> </u>   |              | Ш                    |  |
|   |       | 112   |          | H  | $\vdash$  |              |          |          | ₩  | ├            | dash                 |  |
|   |       | 113   | —        | -  | $\vdash$  |              | -        | $\vdash$ | $\vdash$   | -            | $\vdash \vdash \mid$ |  |
|   |       | 115   |          | H  |           |              | -        | $\vdash$ | $\vdash$   |              | Н                    |  |
| 1 |       | 116   | _        | <del>                                     </del> |           |              |          | $\vdash$ | $\vdash$   | <del> </del> | $\vdash$             |  |
| 1 |       | 112<br>113<br>114<br>115<br>116<br>117<br>118<br>119<br>120<br>121<br>122<br>123<br>124<br>125<br>126<br>127<br>128 | _        |  |           |              | -        | _        |  | <del> </del> | H                    |  |
|   | -     | 118   |          |  |           |              |          |          |  |              |                      |  |
|   |       | 119   |          |  |           |              |          |          |  |              |                      |  |
|   |       | 120   |          |  |           |              |          |          |  |              |                      |  |
|   |       | 121   |          |  |           |              | <u>L</u> | <u> </u> | _  |              | Ш                    |  |
| : |       | 122   |          |  |           |              | _        |          | <u> </u>   |              | Ш                    |  |
|   |       | 123   |          |  | -         |              | <u> </u> |          | ļ  |              | Н                    |  |
| ١ |       | 124   |          | -  | -         | _            |          |          | H  | $\vdash$     | $\dashv$             |  |
| ŀ |       | 126   |          | H  |           | _            | _        |          | $\vdash$   |              | $\dashv$             |  |
| ł |       | 127   |          |  |           | -            |          |          | ┢  |              | _                    |  |
| 1 |       | 128   |          |  |           |              |          |          |  |              | П                    |  |
| ĺ |       | 129   |          |  |           |              |          |          |  |              |                      |  |
| I |       | 130<br>131  |          |  |           |              |          |          |  |              |                      |  |
| ١ |       | 131   |          |  |           |              |          |          |  |              |                      |  |
| ŀ |       | 132   |          |  |           |              |          |          |  |              | Щ                    |  |
| ŀ |       | 133<br>134<br>135<br>136  |          | $\vdash$   |           |              |          |          | $\vdash$   |              | Щ                    |  |
| 1 |       | 134   | _        | $\vdash$   | $\vdash$  |              | $\vdash$ |          | $\vdash$   | $\vdash$     |                      |  |
| ł |       | 136   |          | Н  | $\dashv$  |              | -        |          | $\vdash$   | $\vdash$     | $\dashv$             |  |
| ł |       | 137   |          |  | $\exists$ |              |          |          | П  | $\vdash$     | $\dashv$             |  |
| t |       | 138   |          |  |           |              |          |          |  |              |                      |  |
|   |       | 137<br>138<br>139   |          |  |           |              |          |          |  |              |                      |  |
|   |       | 140   |          |  |           |              |          |          |  |              |                      |  |
| - |       | 141   |          | Щ  | _         |              | Щ        |          | L.   |              |                      |  |
| 1 |       | 142   | _        | $\sqcup$   |           | _            |          | _        | $\sqsubseteq$                                    |              | $\sqcup$             |  |
| ŀ |       | 143   |          | $\Box$   | -         | _            |          |          | $\vdash$   | $\sqcup$     | Ц,                   |  |
| ŀ |       | 144<br>145  | $\dashv$ | $\vdash$   | $\dashv$  | -            | _        | -        | H  |              | $\dashv$             |  |
| ŀ |       | 146   | $\dashv$ |  | $\dashv$  | $\dashv$     | $\vdash$ | -        | Н  | $\vdash$     | $\dashv$             |  |
| ŀ |       | 147   |          | $\vdash$   | $\dashv$  | -            | $\dashv$ |          | Н  | $\vdash$     | $\dashv$             |  |
| t |       | 148   |          |  | $\dashv$  |              |          |          | -  | $\dashv$     | $\dashv$             |  |
| ľ |       | 149   | _ ]      |  |           |              |          |          |  | $\dashv$     | $\dashv$             |  |
|   |       | 150   |          |  |           |              |          |          |  |              | J                    |  |
| _ |       |   |          |  |           | _            |          |          | _  |              |                      |  |